| L Number | Hits |   | DB                     | Time stamp       |
|----------|------|---|------------------------|------------------|
| 73       | 5    | ,   | USPAT                  | 2004/10/13 09:54 |
|          |      | "5298767"   "5666833").PN.  |                        |                  |
| 74       | 11   |   | USPAT                  | 2004/10/13 09:55 |
| 75       | 2    | ,, ,  | USPAT                  | 2004/10/13 09:56 |
| 76<br>77 | 3    |   | USPAT                  | 2004/10/13 09:57 |
| ′′       | 9    | ("4769344"   "5296408"   "5317922"  <br>  "5335550"   "5430421"   "5602385"           | USPAT                  | 2004/10/13 09:57 |
|          |      | "5610431"   "5929728"   "6124145").PN.  |                        |                  |
| 78       | 2    |   | USPAT                  | 2004/10/13 09:58 |
| 79       | 1    | · ·   | USPAT                  | 2004/10/13 09:59 |
| 182      | 8    |   | USPAT                  | 2004/10/13 10:05 |
|          |      | "5419806"   "5880010"   "6255726"   |                        |                  |
|          |      | "6355501"   "6355976").PN.  |                        |                  |
| 183      | 30   | , , ,   | USPAT;                 | 2004/10/13 10:23 |
| İ        |      | periphery or peripheral or outer or outside)  | US-PGPUB;              |                  |
|          |      | near10 (crack or cracking or cracked or   | EPO; JPO;              |                  |
|          |      | corrsion or corroding or corroded or  | DERWENT;               |                  |
|          |      | contamination or contaminating) near10 (dice  | IBM_TDB                |                  |
|          |      | or dicing or singulation or singulating or  |                        |                  |
| 1        |      | cleaving or cleavage or cleave or scribe or scribing)                                 |                        |                  |
| 184      | 346  | (wafer or substrate) near3 (edge or   | USPAT;                 | 2004/10/13 10:24 |
|          | 540  | periphery or peripheral or outer or outside)  | US-PGPUB;              | 2004/10/13 10:24 |
| ļ        |      | near6 (ring or barrier or wall or spacer)   | EPO; JPO;              |                  |
|          |      | near4 (metal or metallic or solder or tin or  | DERWENT;               |                  |
|          |      | copper or cu or gold or au)   | IBM TDB                | ,                |
| 185      | 241  | (wafer or substrate) near3 (edge or   | USPAT;                 | 2004/10/13 10:24 |
|          |      | periphery or peripheral or outer or outside)  | US-PGPUB;              |                  |
|          |      | near6 (ring or wall or spacer) near4 (metal   | EPO; JPO;              |                  |
|          |      | or metallic or solder or tin or copper or cu  | DERWENT;               | 1                |
| 100      | 0.65 | or gold or au)  | IBM_TDB                |                  |
| 186      | 267  | (wafer or substrate) near3 (edge or   | USPAT;                 | 2004/10/13 10:38 |
|          |      | periphery or peripheral or outer or outside)  | US-PGPUB;              |                  |
|          |      | near6 (ring or wall or spacer or ridge or grid) near4 (metal or metallic or solder or | EPO; JPO;<br>DERWENT;  | 1                |
|          |      | tin or copper or cu or gold or au)  | IBM TDB                |                  |
| 187      | 71   | (wafer or substrate) near3 (edge or   | USPAT;                 | 2004/10/13 10:41 |
|          |      | periphery or peripheral or outer or outside)  | US-PGPUB;              | 2004/10/15 10:41 |
|          |      | near6 (seal) near4 (metal or metallic or  | EPO; JPO;              |                  |
|          |      | solder or tin or copper or cu or gold or au)  | DERWENT;               |                  |
|          |      | -   | IBM TDB                |                  |
| 188      | 269  | , , , , , , , , , , , , , , , , , , ,   | USPAT;                 | 2004/10/13 10:42 |
|          |      | periphery or peripheral or outer or outside)  | US-PGPUB;              |                  |
| 1        |      | near6 (seal\$3) near4 (hermetic\$5)   | EPO; JPO;              |                  |
|          |      |   | DERWENT;               |                  |
| _        | 135  | ((die or wafer or chin) noom? (hand on  | IBM_TDB                | 2004/10/12 10 27 |
| -        | 133  | ((die or wafer or chip) near2 (bond or bonding or attachment or attaching or bonded   | USPAT;                 | 2004/10/13 10:07 |
|          |      | or attached) or flip adj chip) and (barrier   | US-PGPUB;<br>EPO; JPO; |                  |
|          |      | or corrosion or contamination or crack or   | DERWENT;               |                  |
|          |      | sealing or seal) near3 (edge or periphery or  | IBM TDB                |                  |
| .        |      | peripheral or outside or outer) near3 (metal  |                        |                  |
|          |      | or copper or cu or metallic or aluminum or  |                        |                  |
|          |      | gold or silver)   |                        |                  |
| -        | 8    | ("4689113"   "5241450"   "5366906"  | USPAT                  | 2004/07/26 16:04 |
|          |      | "5419806"   "5880010"   "6255726"   |                        |                  |
|          |      | "6355501"   "6355976").PN.  |                        |                  |
| -        | 1173 | ((die or wafer or chip or substrate) near2  | USPAT;                 | 2004/07/27 10:39 |
|          |      | (bond or bonding or attachment or attaching   | US-PGPUB;              |                  |
|          |      | or bonded or attached) or flip adj chip) and  | EPO; JPO;              |                  |
|          | j    | (barrier or seal or sealing) near3 (edge or   | DERWENT;               |                  |
|          |      | <pre>periphery or peripheral or outside or outer) near3 (wafer or substrate)</pre>    | IBM_TDB                |                  |
|          |      | means (water or subscrafs)  | L                      |                  |

| -       | 47   | ',' ' ' ' ' '',  | USPAT;              | 2004/07/27 10:52                      |
|---------|------|--|---------------------|---------------------------------------|
|         |      | (bond or bonding or attachment or attaching  | US-PGPUB;           |                                       |
| 1       |      | or bonded or attached) or flip adj chip) and   | EPO; JPO;           |                                       |
|         |      | (barrier or seal or sealing) near3 (edge or periphery or peripheral or outside or outer) | DERWENT;<br>IBM TDB |                                       |
|         |      | near3 (wafer or substrate) near15 (metal or  | 1511_100            |                                       |
|         |      | metallic or copper or cu or gold or au or  |                     |                                       |
|         |      | silver or ag or nickel or ni or aluminum or  |                     |                                       |
|         |      | al)  |                     |                                       |
| -       | 107  | ((die or wafer or chip or substrate) near2   | USPAT;              | 2004/07/27 11:09                      |
|         | 1    | (bond or bonding or attachment or attaching  | US-PGPUB;           |                                       |
|         |      | or bonded or attached) or flip adj chip) and   | EPO; JPO;           |                                       |
|         |      | (edge or periphery or peripheral or outside or outer) near3 (raised or elevated or       | DERWENT;            |                                       |
|         |      | projection or ridge) near10 (metal or  | IBM_TDB             |                                       |
|         |      | metallic or aluminum or al or copper or cu   |                     |                                       |
|         |      | or gold or au or silver or ag or nickel or   |                     |                                       |
|         |      | ni)  |                     |                                       |
| -       | 4108 | ((die or wafer or chip) near2 (bond or   | USPAT;              | 2004/10/06 13:03                      |
|         |      | bonding or attachment or attaching or bonded   | US-PGPUB;           |                                       |
|         |      | or attached) or flip adj chip) and (seal or  | EPO; JPO;           |                                       |
|         |      | sealing or sealed) near2 (hermetic\$5)   | DERWENT;            |                                       |
| _       | 709  | ((die or wafer or chin) noon? (hond on   | IBM_TDB             | 2004/10/06 12 62                      |
|         | '09  | ((die or wafer or chip) near2 (bond or bonding or attachment or attaching or bonded      | USPAT;<br>US-PGPUB; | 2004/10/06 13:08                      |
|         |      | or attached) or flip adj chip) and (seal or  | EPO; JPO;           |                                       |
|         |      | sealing or sealed) near2 (hermetic\$5) near10  | DERWENT;            |                                       |
|         |      | (metal or metallic or copper or cu or gold   | IBM_TDB             |                                       |
|         |      | or au or nickel or ni or platinum or pt)   | _                   |                                       |
| -       | 340  | (wafer near2 (bond or bonding or attachment  | USPAT;              | 2004/10/06 13:49                      |
|         |      | or attaching or bonded or attached) or flip  | US-PGPUB;           |                                       |
|         |      | adj chip) and (seal or sealing or sealed)  | EPO; JPO;           |                                       |
|         |      | near2 (hermetic\$5) near10 (metal or metallic  | DERWENT;            |                                       |
|         |      | or copper or cu or gold or au or nickel or<br>ni or platinum or pt)                      | IBM_TDB             |                                       |
| _       | 287  | flip adj chip same (seal or sealing or   | USPAT;              | 2004/10/06 13:50                      |
|         |      | sealed) near2 (hermetic\$5)  | US-PGPUB;           | ===================================== |
|         |      |  | EPO; JPO;           |                                       |
|         |      |  | DERWENT;            |                                       |
|         | 1.7  | (NO 6206506 A NO 6506115 A   | IBM_TDB             |                                       |
| _       | 17   | (US-6306526-\$ or US-6596117-\$ or US-5241450-\$ or US-6697257-\$ or US-6566745-\$       | USPAT;              | 2004/10/06 14:49                      |
|         |      | or US-6518096-\$ or US-6373130-\$ or   | US-PGPUB            |                                       |
|         |      | US-6643920-\$).did. or (US-20040014308-\$ or   |                     |                                       |
|         |      | US-20010022207-\$ or US-20040104460-\$ or  |                     |                                       |
|         |      | US-20040066258-\$ or US-20040016995-\$ or  |                     |                                       |
|         | 1    | US-20040011783-\$ or US-20020113296-\$ or  |                     |                                       |
|         |      | US-20020090754-\$ or US-20030000067-\$).did.   |                     |                                       |
| _       | 107  |  | USPAT;              | 2004/10/06 15:20                      |
|         |      | sealing or pillar or line or spacer) near5<br>(periphery or peripheral or perimeter or   | US-PGPUB            |                                       |
|         |      | edge or outer or outside)  |                     |                                       |
| -       | 1    |  | USPAT;              | 2004/10/06 14:52                      |
|         | ]    | •  | US-PGPUB            | , ,                                   |
| -       | 8    | ("4689113"   "5241450"   "5366906"   | USPAT               | 2004/10/06 14:52                      |
|         | ]    | "5419806"   "5880010"   "6255726"  |                     |                                       |
|         | 1.00 | "6355501"   "6355976").PN.   |                     | 0004/10/10                            |
| ] -     | 140  | 438/107.ccls. and (barrier or seal or<br>  sealing or pillar or line or spacer) near5    | USPAT;              | 2004/10/12 11:04                      |
|         |      | (periphery or peripheral or perimeter or   | US-PGPUB            |                                       |
|         | 1    | edge or outer or outside)  |                     |                                       |
| -       | 73   | 438/107.ccls. and (hermetic\$5 or peripheral   | USPAT;              | 2004/10/12 10:50                      |
|         |      | or edge) near2 (seal\$3)   | US-PGPUB            | , , == == == :                        |
| -       | 76   | 438/108.ccls. and (hermetic\$5 or peripheral   | USPAT;              | 2004/10/12 10:50                      |
|         |      | or edge) near2 (seal\$3)   | US-PGPUB            |                                       |
| _       | 182  | 438/108.ccls. and (barrier or seal or  | USPAT;              | 2004/10/12 11:37                      |
|         |      | sealing or pillar or line or spacer or<br>sealed) near5 (periphery or peripheral or      | US-PGPUB            |                                       |
|         |      | perimeter or edge or outer or outside or   | }                   |                                       |
|         |      | hermetic\$5)   |                     |                                       |
| <b></b> | L    |  |                     | L                                     |

| -   | 51   | ,  | USPAT;             | 2004/10/12 11:48   |
|-----|------|--|--------------------|--------------------|
|     |      | sealing or pillar or line or spacer or   | US-PGPUB           |                    |
|     | İ    | sealed) near5 (periphery or peripheral or  |                    |                    |
|     |      | perimeter or edge or outer or outside or   |                    |                    |
|     | 74   | hermetic\$5) 438/458.ccls. and (barrier or seal or                                   | 110000             | 2004/10/10 10 00   |
| -   | '4   | sealing or pillar or line or spacer or   | USPAT;             | 2004/10/12 12:00   |
|     |      |  | US-PGPUB           |                    |
|     |      | sealed) near5 (periphery or peripheral or perimeter or edge or outer or outside or   |                    | į į                |
|     |      | hermetic\$5)   |                    |                    |
| _   | 126  | 1 - 1  | USPAT;             | 2004/10/12 12:11   |
|     | 120  | sealing or pillar or line or spacer or   | US-PGPUB           | 2004/10/12 12:11   |
|     | 1    | sealed) near5 (periphery or peripheral or  | OS PGPOB           |                    |
|     |      | perimeter or edge or outer or outside or   |                    |                    |
| İ   | 1    | hermetic\$5)   | i                  |                    |
| -   | 144  | 438/462 ccls. and (barrier or seal or  | USPAT;             | 2004/10/12 12:18   |
|     | ]    | sealing or pillar or line or spacer or   | US-PGPUB           |                    |
|     |      | sealed) near5 (periphery or peripheral or  |                    |                    |
|     |      | perimeter or edge or outer or outside or   |                    |                    |
|     |      | hermetic\$5)   |                    |                    |
| -   | 1305 | (scribe or scribing or cleave or cleaving or   | USPAT;             | 2004/10/12 12:19   |
|     |      | singulating or singulation or dice or  | US-PGPUB           |                    |
|     |      | dicing) near5 (barrier or seal or sealed or  |                    |                    |
|     |      | sealing)   |                    |                    |
| -   | 82   | ,  | USPAT;             | 2004/10/12 12:20   |
|     |      | singulating or singulation or dice or  | US-PGPUB           |                    |
|     |      | dicing) near8 (barrier or seal or sealed or  |                    |                    |
|     |      | sealing) near4 (hermetic\$5)   |                    |                    |
| -   | 27   |  | USPAT;             | 2004/10/12 14:09   |
|     |      | US-6306526-\$ or US-5241450-\$ or US-6697257-\$                                      | US-PGPUB           |                    |
|     | İ    | or US-6566745-\$ or US-6518096-\$ or   |                    |                    |
|     |      | US-5262351-\$ or US-6643920-\$ or US-6649444-\$                                      |                    |                    |
|     |      | or US-6479320-\$ or US-6455353-\$ or US-6238951-\$ or US-6297072-\$ or US-5401672-\$ |                    |                    |
|     |      | or US-6461893-\$).did. or (US-20040014308-\$   |                    |                    |
|     |      | or US-20010022207-\$ or US-20040104460-\$ or   |                    |                    |
|     |      | US-20040066258-\$ or US-20040016995-\$ or  |                    | İ                  |
|     |      | US-20040011783-\$ or US-20020113296-\$ or  |                    |                    |
|     |      | US-20030000067-\$ or US-20020119597-\$ or  |                    |                    |
|     |      | US-20020106867-\$ or US-20010055856-\$).did.   |                    | 1                  |
| -   | 571  | (wafer or substrate or chip or device) near3   | USPAT;             | 2004/10/12 14:10   |
|     |      | (edge or periphery or peripheral or scribe   | US-PGPUB           |                    |
|     |      | or scribing or singulation or singulating or   |                    |                    |
| -   | 1    | cleave or cleavage or cleaving or dicing)  |                    |                    |
|     | ]    | near8 (seal or sealing or guard or barrier   |                    |                    |
|     | 1    | or wall or spacer) near3 ring\$2   |                    |                    |
| -   | 653  | (wafer or substrate or chip or device) near3   | USPAT;             | 2004/10/12 14:11   |
|     |      | (edge or periphery or peripheral or scribe   | US-PGPUB           |                    |
|     |      | or scribing or singulation or singulating or   |                    |                    |
|     |      | cleave or cleavage or cleaving or dicing)  |                    |                    |
|     |      | near8 (seal or sealing or guard or barrier   |                    |                    |
| _   | 126  | or wall or spacer) near3 ring\$2<br>(wafer or substrate or chip or device) near3     | HCDam              | 2004/10/20 7 : 7 7 |
|     | 420  | (edge or periphery or peripheral or scribe   | USPAT;<br>US-PGPUB | 2004/10/12 14:12   |
|     |      | or scribing or singulation or singulating or   | US-FGPUB           |                    |
|     |      | cleave or cleavage or cleaving or dicing)  |                    |                    |
|     |      | near5 (seal or sealing or guard or barrier   |                    |                    |
|     |      | or wall or spacer) near2 ring\$2   |                    |                    |
| -   | 6959 | (wafer or substrate) near2 (periphery or   | USPAT;             | 2004/10/12 17:12   |
|     |      | edge or peripheral or outer) near6 (barrier  | US-PGPUB;          | ,, 1, 12           |
| ļ i |      | or spacer or ring or seal or sealing)  | EPO; JPO;          |                    |
|     |      |  | DERWENT;           |                    |
|     |      |  | IBM_TDB            |                    |
| -   | 1654 | (wafer or substrate) near2 (periphery or   | USPĀT;             | 2004/10/12 17:13   |
|     |      | edge or peripheral or outer) near6 (barrier  | US-PGPUB;          |                    |
|     |      | or spacer or ring or seal or sealing) and  | EPO; JPO;          |                    |
|     |      | (wafer or substrate) near3 (stack or stacked   | DERWENT;           |                    |
|     |      | or stacking or bonding or bonded or bond or  | IBM_TDB            |                    |
|     | L    | 3d or "3-d" or three near dimensional)   |                    |                    |

| - | 210 | (wafer or substrate) near (periphery or edge | USPAT;    | 2004/10/12 17:13 |
|---|-----|--|-----------|------------------|
|   |     | or peripheral or outer) near4 (barrier or    | US-PGPUB; |                  |
|   |     | spacer or ring or seal or sealing) same      | EPO; JPO; |                  |
|   |     | (wafer or substrate) near3 (stack or stacked | DERWENT;  |                  |
|   |     | or stacking or bonding or bonded or bond or  | IBM TDB   |                  |
|   |     | 3d or "3-d" or three near dimensional)       | _         | 1                |